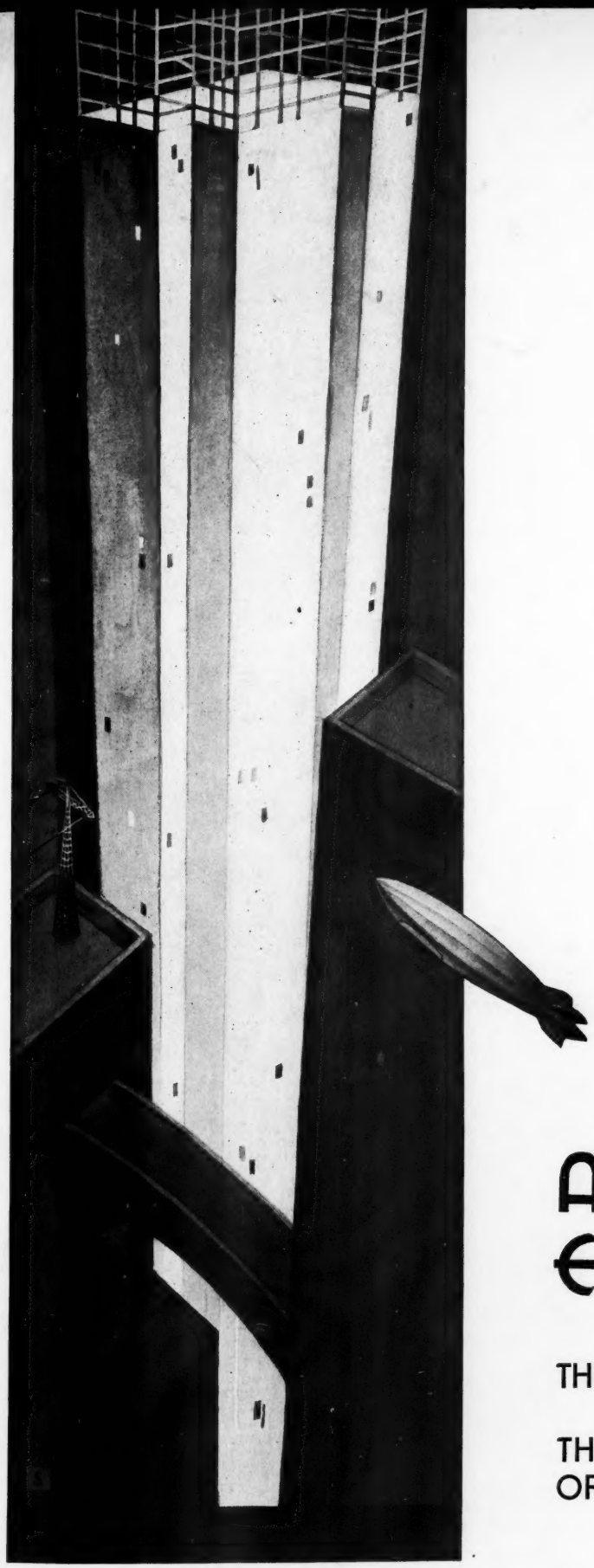

The AMERICAN ENGINEER

OFFICIAL PUBLICATION
THE NEW YORK STATE SOCIETY
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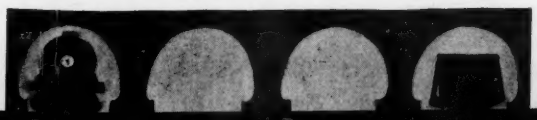
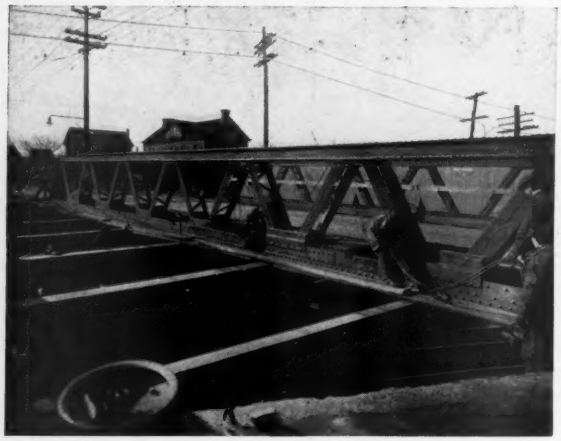
JUNE + + + 1932





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Arthur V. Sheridan, Editor

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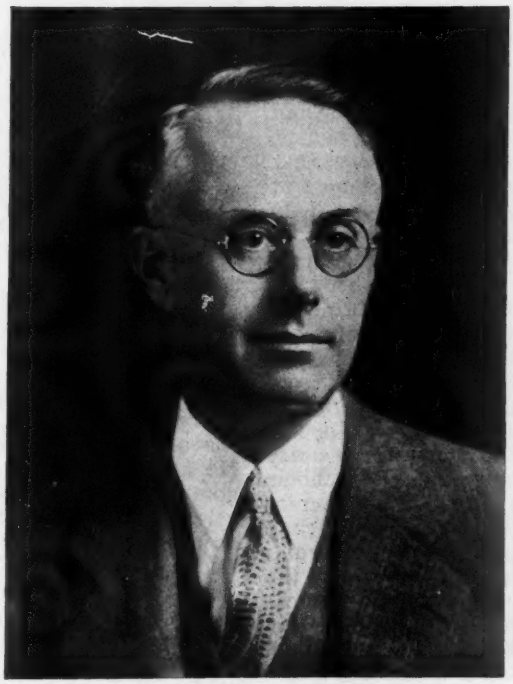
NUMBER 6 JUNE, 1932

PORT OF ALBANY OPENED

Official Exercises — June 6th and 9th

WITH elaborate ceremonies lasting two days the $18,000,000 Port of Albany, which has been brought into being under the direction of the Port of Albany District Commission, of which Peter J. Ten Eyck is Chairman, former State Engineer Dwight B. La Du, a member, and Arnold Chapman, Chief Engineer, was officially dedicated and opened on June 6th and 7th last.

The presence of, and addresses by, Governor Franklin D. Roosevelt, Assistant Secretary of War Frederick H. Payne, Mayor John Boyd Thatcher of Albany, Mayor James Johnstone of Rensselaer and others prominent in public and civic life, a brilliant military parade, airplane manoeuvers and various other activities and demonstrations combined to create an epoch making occasion in the history of the cities of Albany and Rensselaer



ARNOLD G. CHAPMAN

The details of the great project, the hopes of its sponsors and the possibilities it offers were discussed by the numerous speakers. The details of these are beyond the scope of this publication. Even the press found itself unable to convey more than the mere outline of this most interesting project. Its inception, design and accomplishment make a fascinating chronicle, not alone for the engineer but for the layman as well. Those who have not heard Chief Engineer Chapman would be well repaid for inviting him to tell the story of the creation of the Port.

Albany is today an inviting terminus for shippers from all parts of the world and the activities of the past year, during which freight from far and near points has been unloaded at the new modern docks, yards and warehouses, justifies the hope that the State Capital will one day become a great point of distribution for the world's goods.

Governor Roosevelt, in his dedication address, advocated the use of responsible, legally created authorities to carry out certain public improvements. He referred to the Port Authority of New York, the Albany Port Commission and the several Bridge and Tunnel Commissions as examples of machinery which make possible great engineering projects without increased annual taxes. Speaking on this subject the Governor said:

"It is our firm belief that these great wharves, warehouses and elevators will, instead of being an annual expense to the State Government, be paid for by the actual users of the facilities and paid for over a period of years, as is wholly proper. In the fulfillment of this dream I congratulate you who are here, and indeed all of the citizens of our State."

The ceremonies, which were broadcast throughout the nation, concluded with a "wedding of the waters," in which waters from 100 different ports of the world were mixed with the water of the new port to symbolize its link with the seven seas.

On Wednesday evening a dinner was held under the auspices of the Albany Chapter, of which Vice-President Arnold Chapman of the State Society, was formerly president.

Congratulations, Arnold Chapman. The Society is proud to include Dwight LaDu and yourself amongst its active membership.

ANNUAL CONVENTION

New York, May 21st

THE Hotel Commodore was the scene of the annual meeting and dinner which was held on the above date.

MEETING

President Steinman called the meeting to order at 3:00 o'clock with Assistant Secretary W. A. Stubbs and Miss M. L. Monahan recording the minutes. Representatives from various parts of the State were present. The attendance was on the whole disappointing, but not unusual in the face of existing conditions.

The committe appointed to canvass the ballots reported the results of the election for officers and directors as follows:

President, D. B. Steinman.
First Vice-President, A. G. Chapman.
Second Vice-President, H. A. Kidder.
Financial Secretary, E. F. Fox.
Treasurer, P. M. Corry.
Directors for three years, E. Hausman, F. Ward, F. R. Harris, H. G. Balcom, F. X. Bode, C. R. Waters, J. L. Holst, C. H. Sells.

The total number of votes cast was 738, practically all of which were for the official nominees.

The activities, accomplishments, prospects and hopes of the Society were outlined by President D. B. Steinman, who acknowledge the support that had been tendered him during his incumbency of office.

Amongst the matters of particular interest covered by the President were: A greatly increased and, in spite of conditions, continually growing membership; accomplishment of legislation predicated on the principles of the Society; the establishment of friendly relations with the architectural profession and the promise that architects would themselves see to the amendment of the Multiple Dwelling Act at the next session of the legislature; the conferences and efforts to unify and simplify the degrees in engineering schools with a view to uniform undergraduate courses leading to a degree of Bachelor of Engineering, which efforts promise shortly to become an accomplishment; continued reduction of the abuse of the term engineer; the national program of certification into the profession now under consideration by the national societies and the National Council of State Boards; the completion of a national model law, which embodies practically everything this Society has advocated; court decisions involving engineers who violated the law; and various other items of accomplishment. Lack of space prevents the elaboration President Steinman's address warrants.

The reports of Financial Secretary Fox and Treasurer Corry indicate a healthy growth and financial condition.

Vice-President Arnold G. Chapman, as Chairman of the Legislative Committee, reported on legislation, past and pending. In passing he commended the efforts and co-operation of the Engineers' and Architects' Boards, Harlan Horner, and Chas. Heisler of the State Education Department, Senator Desmond and Assemblyman Sargent of the State Legislature, and others who had rendered outstanding service. He emphasized what Senator Desmond had previously stated: that the real hard work of 1931 had brought about the happy results of 1932.

The Chairman of the Membership Committee, Fred H. Zurmuhlen, Jr., of Richmond, detailed the activities of that Committee and referred to the formation of the two latest additions to the family of Chapters, Columbia and Dutchess Counties which were organized with 20 and 50 charter members, respectively, during the month of May. Mr. Zurmuhlen pointed out that the State is now effectively organized throughout, with the exception of the lower western tier of counties. He complimented the Committee on Chapter Activities and Mr. Bode of Albany Chapter, for the assistance rendered in the formation of new chapters. Mr. Bode was extended a vote of appreciation by the delegates present. The question of continuing any membership in organized counties, except through the local Chapter, was referred to and consideration of the same asked by the Chairman.

Publicity was accounted for by Chairman Raymond J. Van Wagner of the Committee, who referred particularly to THE AMERICAN ENGINEER. This publication has now become, by arrangement between the Executive Boards of the New York State Society and the New Jersey Association of Professional Engineers, the official publication of both Societies. The circulation of the magazine will hereafter approach the 7,000 mark.

Arthur V. Sheridan, Chairman of the Committee on Ethics and Practice, advised that four major charges filed during the year revealed the fact that the offenders were not members of the Society. He advised that to date only two Chapters had complied with the directions of the executive board relevant to Chapter Codes. The Committee recommended that Chapters be instructed to proceed at once to the adoption of Codes of Practice. It also outlined the question of making unethical practice grounds for discipline and asked for consideration of the matter by the Society.

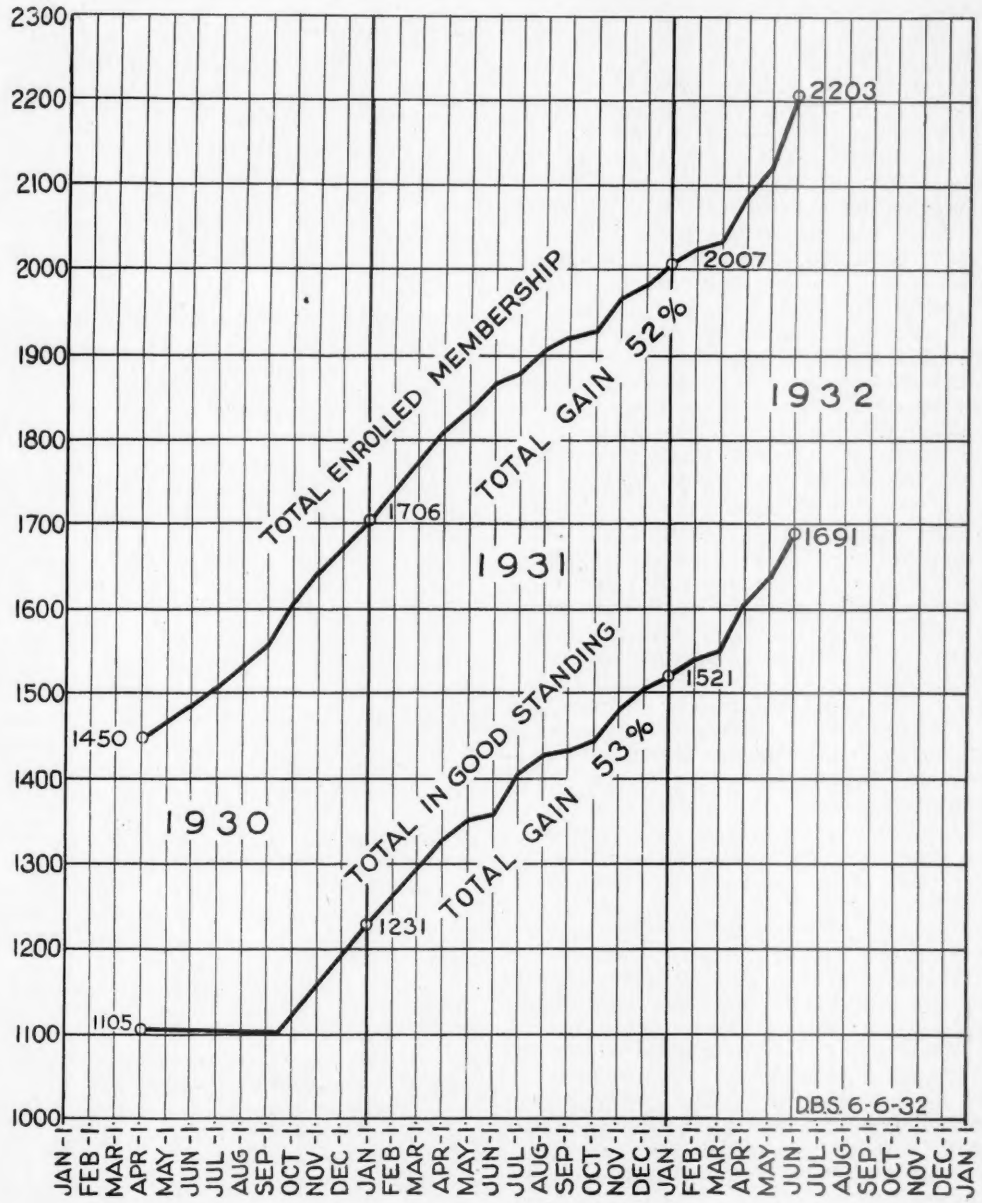
In the absence of Chairman Raphael J. Smyth, whose illness prevented attendance, the report of the Committee on Chapter Activities was read by Assistant Secretary Stubbs. Mr. Smyth was commended for his efforts, which Mr. Zurmuhlen had previously referred to.

The Chairman of the Special Committee appointed to revise the Constitution, Mr. Edgar A. McKenna, reported that a new instrument would shortly be ready for consideration. The proposals will be distributed to the Chapters in time to permit expression of opinion before submitting a final draft

(Continued on Page 10)

GROWTH OF NEW YORK STATE SOCIETY OF PROFESSIONAL ENGINEERS

Report of the Financial Secretary, Ernest F. Fox, Jr.



The above graph, prepared by Financial Secretary Fox at the suggestion of President Steinman, indicates the membership expansion of the New York State Society during the past two years. Despite the pressure of economic conditions the Society has experienced a very healthy growth which promises well for the days when the present emergency shall have passed.

Taken together with the map showing the Chapter membership published in the April issue of THE AMERICAN ENGINEER, and to which two additional Chapters should now be added, this graph portrays the progress of the professional movement in this State and the reason for the recognition which has come to the profession since the formation of the State Society.

ENGINEERS AS ECONOMISTS

American Engineering Council Report Points the Way to a Rebirth of Political Economy

ON February 8th last a special committee, consisting of R. E. Flanders, Chairman, L. P. Alford, F. J. Chesterman, Dexter Kimball and L. W. Wallace, appointed in January, 1931, by American Engineering Council to study problems and forces incident to an evaluation and equation of economic forces, made a progress report that should have stirred the entire thinking world. The fact that it has not produced such an effect merely serves to indicate how little officials, financiers and self-styled economists actually understand abstract economics. Steeped in the sophistry and fallacies that have arisen from theories predicated upon untenable premises, these so-called experts cannot appreciate a philosophy that demands the recognition of first principles and axiomatic truths. Effects spring from causes and the failure of financiers and economists to give ear to the report of the Engineering Council's Committee can be readily understood when one realizes that men unfamiliar with true science can hardly be expected to understand or adequately administer a civilization resulting from the applications of such science.

The time has arrived when society must recognize and turn to the engineer if civilization is to continue its evolution. If public officials and financiers continue to ignore the engineer as a directing influence in the regulation and administration of civilization, then the latter must recognize that it becomes his duty, as a moral obligation which he owes to society, to go before the masses and offer his services directly to the people.

A short time back the person who prophesied that the engineer must supplant the banker and financier in directing the affairs of mankind would have been classed as an ignorant and vicious iconoclast, even by many leaders of the profession itself. How different is the attitude of the moment. Pronouncements and doctrines that would but a few years ago have brought anathema upon their authors from the seats of the mighty are today tolerated and will tomorrow be accepted. It is becoming undeniably apparent that the structure of future civilization must follow some fundamentally sound plan if it is to survive and that the training and reasoning processes of the engineer make him a more competent political economist than those who, professing to be experts in the subject, cannot differentiate between the absoluteness of mathematics or physical laws and the uncertainty of their very human opinions and theories which they wrongfully insist on proclaiming science.

Teaching ephemeral opinions and practices as science is unwarranted and dangerous to society. Matters that are of a subjective nature, not obedient to infallible physical and natural laws, are not true science and should not be so classified and taught. There may be laws that pertain to and regulate men's minds and thoughts, but to date no human being has ever demonstrated such laws, and, until capable of absolute, universal and infallible demonstration, the use of the term science should be restricted to those subjects which can be proven beyond question.

One may dissertate interminably and to no conclusion upon the relative merits of Aristotelean and Baconian methods of reasoning; compare deductive and inductive logic, or inveigh for and against analytical as compared with synthetic processes. That the world owes much to the modern experimental form none can gainsay. The progress of human knowledge in the field of physical science is almost entirely the fruit of such procedure. It has, however, led to a confusion of the physical and mental phenomena of the universe by men who, unaware of the nature and immutability of real science, have mistaken humanly created conditions and relations for divinely ordained laws. Effects are frequently mistaken for causes; conclusions are dogmatically promulgated without concern as to the premises from which they spring, and society becomes afflicted with the hit and miss fever that runs the gamut of human emotions from matrimony to financial speculation.

The engineer has never built upon unstable foundations. His constructive efforts, whether directed upward, outward, or downward have never failed regardless of their magnitude or complexity. Why? Because he has never lost sight of fundamental truths, of first principals. He inherently appreciates that no conclusion can be better than or embrace anything not contained in the premises upon which it is predicated.

No group in the body politic is as well fitted to lead the nation out of the morass of economic chaos into which it has been sinking for the past few years as is the profession that has been the cause of the highly integrated civilization which now shows signs of aging mechanisms and inadequate control.

The program proposed by the American Society of Civil Engineers and the progress report of the American Engineering Council's Committee indicate that the course of human events is about to undergo a change such as mankind has never before witnessed. It is coming as certain as is tomorrow. It cannot be prevented. It is inevitable. Appreciative of this engineers should give immediate attention to that which, as "hand-maids of nature," it is their moral obligation to direct and control, ere it get out of hand; viz.—a new society predicated upon the realization that man must reconcile a changing civilization with an unchanging human nature. This the American Engineering Council Committee comprehends when it contemplates "a purposeful changing of the course of history."

INGENIEUR

UNEMPLOYMENT

Causes and Remedies

THE following proposal presented by Mr. Claxton N. Ely of Queens is published at the suggestion of the Chapter, before which it was presented at a recent meeting:

* * *

A SUGGESTION IN REFERENCE TO EMPLOYMENT

In the January, 1932, issue of THE AMERICAN ENGINEER, under the heading, "Meeting of the Executive Board held in New York January 18th, 1932," reference was made to a proposal submitted by Mr. A. V. Sheridan "relevant to the grave condition facing the country." Attention was also directed to the fund set aside by Mr. Henry L. Doherty for the purpose of permitting engineers to develop a program to end unemployment.

From the substance printed in the referred to issue, it is inferred that the Sheridan proposal in a great measure dealt with the creation of employment incidental to a nation-wide program of public improvements as an emergency measure, whereas the Doherty Fund is for the purpose of developing a program for permanently stabilizing employment: Both of which are vitally necessary to the welfare of the nation's population. However, inasmuch as public improvements approximately keep abreast with local and regional requirements, extreme care should be exercised, in the institution of any nation-wide public improvement program, in order to avoid over development or development beyond the needs of the present and immediate future. Otherwise there would be a resultant stagnation which is the very condition we desire to avoid. In other words, such a program should be subject to regulation for the purpose of reducing to the minimum the infringement upon normal activity incidental to normal development. Thus, providing a measurable relief to the unemployed of the present without great detriment to employment in the future.

On the other hand the development of a program to end unemployment involves the study and analysis of many factors and to be of permanent benefit it must possess sufficient flexibility to conform with the advancement of civilization. Furthermore, it must possess almost limitless scope and be sufficiently comprehensive to embrace all of the nation's gainful and beneficial enterprises. Therefore, it is quite evident the evolving of such a plan is a several man size job. Hence, this is but a suggestion made with the hope that a line of thought will be awakened which may guide toward that something which proves worthy of development.

Without regard to relative importance our national pursuits, in a broad sense, may be classified as: Agriculture, Industry, Transportation, Utilities, Public Works, Engineering, Finance, Real Estate, Merchandising and Public Welfare, each with numerous and diversified subdivisions, all of which are so interdependent that activity in one is proportionately reflected in the activities of all of the others.

Stabilization of employment means stabilization of activities in all lines of endeavor which in turn necessitates the balancing of all enterprise to meet the market demand caused by the diverse needs and whims of the human race. This balancing is actually accomplished with a marked degree of success under our present system, except at times when the system's functioning is materially interrupted by some form of catastrophe. Hence, catastrophe is the scapegoat to be led out of camp.

So let us study "catastrophe" and try to classify its several forms:

I.—Catastrophe due to some convulsion of nature, such as: Flood, Drought, Earthquake, etc., or mayhap pestilence.

Cause beyond human control or practically so.

Regions affected relatively small, except in rare instances.

Economic Loss mostly local; seldom if ever nation-wide.

II.—Catastrophe due to acknowledged strained international relations leading to war.

Cause believed to be within the scope of human control. Our best minds are wrestling with the subject. However, thought to be occasionally necessary in order to preserve the ideals and rights of a people.

Regions affected relatively large.

Economic Loss frequently widespread. At least, usually nation-wide.

III.—Catastrophe due to international striving for commercial supremacy along similar lines, where one nation may possess considerable advantage by reason of relatively low production costs.

Region affected frequently large.

Cause difficult to control by reason of its nature.

Economic Loss and Gain in proportion. Loss can be minimized.

IV.—Catastrophe due to:-

(a) Wide differences in group opinion resulting in social or other forms of upheaval: (Our Civil War being an extreme example).

(b) Or, enactment of sumptuary laws which prove impractical and costly by reason of being distasteful to a large proportion of a population.

(c) Or, burdensome taxation which impedes legitimate business development, threatens personal security, and otherwise works hardship on a large proportion of a population.

Region affected frequently relatively large.

Cause difficult to control by reason of its nature.

Economic Loss in proportion to tenacity of opinion.

V.—Catastrophe due to maladministration in positions of public and private trust.

Region affected may be wide.

Cause entirely within limits of human control.

Economic Loss may be greater than generally suspected.

(Continued on Page 16)

THE PYRAMID OF CHEOPS

By Leopold Leitner

WHILE the subject of archaeology was being developed there existed much speculation about the most widely known structures of the ancient world,—the pyramids of Egypt. This speculation was greatly fostered by eminent scientists. People were not satisfied to regard the pyramids merely as burial places; they were looking for some hidden meaning behind the outward forms of these colossal monuments. Each Divine Revelation was drawn in when earthly explanations seemed insufficient. The study of archaeology has rid itself of these outgrowths, but many of them have remained in the minds of laymen.

The pyramid of Cheops at Gizeh, commonly called the "great pyramid," always seemed to have a unique position among the others. It does differ from them in one respect: it was more accurately built than the remainder of them. In addition, it has some accidental characteristics which made it a fertile soil for those looking for mystical explanations; it was built almost exactly on the 30th circle of latitude; its dimensions have some peculiarities; the mummy of the pharaoh was not in the sarcophagus, nor was the cover of the sarcophagus found.

Mr. L. Borchardt, noted Egyptologist, in a lecture delivered before the Hither-Asiatic-Egyptian Society at Berlin in 1922 (also published in pamphlet form: "Gegen die Zahlenmystic an der grossen Pyramide bei Gize") gives the principal points of the controversy and offers a rational explanation. What follows is mainly taken from this lecture.

It is true that the top of the pyramid is only a little more than one minute south of the 30th degree of latitude, but, on the other hand, all the pyramids of that time were built not far from it. The pyramids were built near the palaces of the pharaohs so that they could conveniently view the progress of the work. The first one to build selected the best location, a place of high elevation in the valley, so as to make the structure appear big. The next pharaoh had to take a less favorable place. Mr. Borchardt believes that the pharaohs even changed their residences and moved to places where they found a more favorable location for their pyramid. The site of the pyramid of Cheops was selected with that point in view; it was built on the most favorable location. It happened to be near the 30th circle of latitude. But the Egyptians did not know it; we have no reason to believe that they were able to measure latitudes.

More interesting are the geometrical characteristics of the pyramid. If we strike a circle with the height of the pyramid as a radius, the circumference of this circle is nearly equal to the perimeter of the base of the pyramid. To be sure there is a difference but the difference is rather small. On the other hand, the ratio of one-half of the base of the pyramid to the height of one of the sides is almost the same as the height of this side to the sum of this height and half the base; in other words, one-half of the base is the smaller, and the height of the side the larger distance of a line divided almost according to the "golden ratio." The error again is very small. Of course, both cases could not hold true at the same time, and since the discrepancy from the actual condition is very small in either case, two "schools" formed, one of them maintaining that the Egyptians knew the exact value of "π", the other that they knew about the "golden ratio."

Mr. Borchardt does not belong to either; but he gives us a solution of the problem. He explains how the Egyptians measured verticle angles. In the "mathematical papyrus" of the British Museum some problems relating to pyramids are worked out; the data of the problems and also the answers are given. One problem, for example, consists of getting the angle of inclination of the sides by having given the base length and the height of the pyramid. The angles are given in measures of length, in "hands," to be more exact (1 Egyptian yard = 7 hands = 28 fingers). It is evident from these problems that the Egyptians measured vertical angles by what we would call the "cotangent" of the angle. The side opposite was always understood to be 7 hands, and to denote the size of the angle they gave the side adjacent in hands. It is quite logical that in order to simplify their calculations, they did not use complicated figures for the adjacent side; they expressed it in whole numbers and simple fractions.

Looking at the pyramid of Cheops in the light of this knowledge, we find that the vertical angles of the sides are equal to 5½ hands Egyptian measure. We may add that this figure is just about midway between the figures we would get from the other two assumptions. In other words, if the Egyptian architect had had the circle theory in mind, he would have had to use a "cotangent"= 5.4979 hands, and with the "golden ratio" a "cotangent" = 5.5032 hands. We can see that this is merely a geometrical coincidence.

Another theory claims that the volume of the sarcophagus, inclusive of the cover, is the standard of the old English quarter (volume of sarcophagus = 4 English quarters). The Egyptian builder accordingly wanted to perpetuate this measure in the volume of the sarcophagus.

The Egyptian had an ingenious method of closing a sarcophagus; once it was closed it could not be opened again, unless it was destroyed. It had the shape of a box, one vertical side of which was lower than the other three. The three higher sides were bevelled on the inside and the cover was shaped to fit these bevels. The sarcophagus was closed by pushing the cover over it just like we do with a drawer. The cover could not be lifted off on account of the bevels. To prevent it from being pulled out again, round holes were cut into the lower vertical side of the sarcophagus into which plugs dropped from corresponding holes in the

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NEW YORK NEWS

REPORT OF LICENSE BOARD

Shows State Benefits Financially

During the year ending July 31, 1931, the New York State Board of Licensing of Professional Engineers and Land Surveyors considered 1911 applications for licensing. Of this number, 1,051 (or 55%) were approved for license, 597 (or 31%) were rejected, and 263 (or 14%) were held over for further consideration.

The net fees collected during the year (including application fees not returned and renewal fees) amounted to $43,069.50. The expenditures of the State Education Department charged to the administration of the Licensing Law for Engineers and Land Surveyors were as follows:

Communication	$ 4,069.37
Printing	2,299.33
Services	9,223.64
Traveling	1,796.03
Equipment and Supplies	755.19
Contingencies	7.72
	$18,151.28

This left an unexpended balance of $24,918.22 (or 58%) which, in accordance with the statutory provision, was turned over to the State Treasury.

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QUEENS COUNTY CHAPTER

Upwards of fifty members of Queens County Chapter on May 26th attended the first Chapter meeting held at the new Chapter headquarters in the Med ical Society Building. The occasion was graced by the presence of Miss Olga Mary Saroka, a member of the Chapter, who has the distinction of being the only lady in the State who holds a Professional Engineers' license.

The Chapter was installed in its quarters with appropriate ceremonies which were infused with the eloquence of Mr. Arthur V. Sheridan, Past President of the Society, who participated as the guest-speaker of the evening. Dr. D. B. Steinman, President of the Society, who was unavoidably prevented from attending, telegraphed his felicitations to the Chapter upon its association with the Medical Profession and also his congratulations upon the enviable record of accomplishment with which the Chapter is credited.

A special committee was appointed, under the Chairmanship of Mr. George H. Burns, to arrange a program of exercises for the ceremony which will be held on June 18th in connection with the dedication of the Mall of Engineering on Queens Boulevard—one of the great thoroughfares in Queens County. The dedication exercises of this mall—which is one of the thirteen malls symbolizing the thirteen orig inal states—will be part of the National Bicentennial Celebration of the birth of George Washington. Mr. A. V. Sheridan has been invited to be the principal speaker at the exercises.

Resolutions were adopted, and ordered transmitted to the Board of Estimate and Apportionment, recommending the retention of the engineering personnel of the City of New York on the ground that curtailment of engineering work will result in considerable curtailment of the City revenue and will aggravate the existing distressing unemployment situation.

It was also recommended that the State Society adopt a policy whereby the membership status of unemployed Society engineers be unaffected by the temporary non-payment of dues and that the collection of such dues from unemployed members be deferred until the period of unemployment terminates.

The quality and quantity of the refreshments earned and received high praise.

On June 2nd Queens County gathered together "her beauty and her chivalry" at the Hollywood Restaurant in Manhattan to celebrate the completion of twenty five years of efficient and honorable public service by one of her most popular sons—Andrew K. Johnson, Chief Engineer of Highways of the Borough of Queens and Vice-President of the Chapter.

The attendance of four of the 500 celebrating well-wishers was remarkably significant. They were: Charles M. Clark, Department Engineer of the Board of Water Supply, (now in charge of 20 miles of tunnel construction costing $45,000,000 in the Boroughs of Queens, Brooklyn and The Bronx); Hon. Bernard M. Patten, former President of the Borough of Queens; Hon. Michael J. Shugrue, former Commissioner of Public Works in Queens; Hon. George U. Harvey, present President of the Borough of Queens. These four gentlemen represented the unbroken continuity of administrative and executive authority under which Mr. Johnson served during his entire public career and their presence constituted a remarkable testimonial of unanimity of approval of his conduct and accomplishments.

Dignitaries of the County and Borough governments and notable members of the Engineering Profession were in the throng. The stage also sent distinguished representatives in the persons of Florenz Ziegfeld, the theatrical producer universally known as a master connoisseur of feminine pulchritude, and Bert Wheeler who is famous in the vaudeville and screen worlds as one of the outstanding contributors to the gayety of the nation.

Hon. John J. Halloran, present Commissioner of Public Works in the Borough of Queens, presented Mr. Johnson with a handsome engraved watch as a memento of the happy occasion.

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WESTCHESTER COUNTY CHAPTER

On May 4th about forty (40) members of the Westchester County Chapter gathered at the Sawmill River Plant of the Westchester Lighting Co. to inspect a new gas pump which had been recently installed. The plant is thoroughly modern and its splendid equipment was viewed with much interest by the visitors.

Following the inspection the regular Chapter meeting was held at the Yonkers office of the Westchester Lighting Co. at which Mr. Harold Watt, President, occupied the Chair. After the transaction of the business of the meeting two reels of motion pictures depicting "The Manufacture of Gas" and "The History of the Gas Industry" were shown with marked evidences of appreciation by the members.

BRONX COUNTY CHAPTER

The Bronx County Chapter held its regular monthly meeting on June 2nd at the Concourse Plaza Hotel. The guest-speaker of the evening was Brother Leo, Dean of Engineering, Manhattan College, New York City. Brother Leo dwelt upon the importance of the engineer as a social factor and described the opportunities for greater civic service offered to him outside of the technical confines of his profession. The address was delivered to a keenly interested and sympathetically responsive audience.

Professor Alexander Haring, President of the Chapter, was prevented by a previous engagement from concluding the business of the meeting and was succeeded in the Chair by Mr. Joseph F. Lamb, Vice-President, a parliamentarian of acknowledged pro ficiency.

On Saturday evening, June 4th, twenty of the officers and directors of the Chapter attended a dress rehearsal of the new musical comedy "Hey, Nonny, Nonny" as guests of President Haring.

On Monday, June 6th, a dinner was tendered to Professor Haring by upwards of fifty members of the Public Speaking and Business Law classes which he has been conducting during the past year. Over a dozen members of the Speaking Class demonstrated their ability and the facility of expression and fluency of thought displayed by them revealed the fact that the Chapter possesses an unusually large percentage of capable speakers. The members presented President Haring with a silver mounted mahogany gavel which he will wield as the symbol of his authority and possess at the conclusion of his term of office as a memorial of the high esteem with which he is regarded by the Engineers of The Bronx. The presentation speech delivered by Mr. Raymond C. Van Wagner was most graceful in its expression and happy in its similies.

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ST. LAWRENCE-FRANKLIN-CLINTON COUNTIES CHAPTER

Charles B. Schermerhorn, Secretary of the St. Lawrence-Franklin-Clinton Counties Chapter, has reported that a meeting of the Chapter was held at Ogdensburg on May 14th at which Mr. A. E. Bartlett presided.

Mr. Harry Homberger was selected to serve on the Board of Directors to succeed Mr. Charles W. Golder, recently deceased.

President Bartlett discussed the Engineers' License Law as revised by the last Legislature and submitted specific evidence showing that the efforts of the Chapter to prevent the misuse of the term engineer in the territory within the jurisdiction of the Chapter are producing results.

* * *

KINGS COUNTY CHAPTER

A regular monthly meeting of the Kings County Chapter was held at the Brooklyn Engineers Club on May 19th.

Mr. Roy C. Cram, Secretary of the Chapter, reports that the Chapter is undertaking a study of a long advocated proposal to construct a freight tunnel connecting New Jersey with Long Island. This study is being made in cooperation with the Long Island 10 Year Plan Committee, the Port of New York Authority and the Pennsylvania Railroad. The project is one of great importance to the industries of Long Island because of the great volume of freight which now must be moved by lighters from the railroad terminals in New Jersey. A special committee, under the Chairmanship of Linford S. Stiles, has been appointed to investigate and report upon the project.

In the May issue of the American Engineer the president of the Kings County Chapter, Mr. Charles W. Burke, advocated the construction of revenue producing public improvements by private capital. The investment with a reasonable return is to be amortized from moderate toll charges and when the cost, plus a reasonable profit, is recouped the improvement would be transferred to the proper governmental authority. It has been suggested that the proposed freight tunnel might be constructed and financed inaccordance with the proposal advocated by Mr. Burke.

The following committee appointments were announced:

Membership Committee: R. W. Gilkey, Chairman: F. E. Lane, L. S. Stiles, W. M. Purdy, M. E. Ungerleider.

Ethics and Practice Committee: Edward J. Squire, Chairman: John L. Hogan, Adolph Shpiesel.

Program Committee: Louis G. Nieman, Chairman: E. J. McCormick, W. E. Paulson, G. A. Dorfman, Fred Wackenhut.

Employment Committee: Benjamin Joachim, Chairman: R. S. Moore, John J. Donegan.

Committee to confer with Brooklyn Bar Association: J. C. Riedel, Chairman: Frederick Ward, L. G. Nieman, Benjamin Joachim.

Committee to confer with Brooklyn Chamber of Commerce: Charles R. Ward, Chairman: Frederick Ward.

Publicity Committee: Roy C. Cram, Cairman.

Legislative Committee: John C. Riedel, Chairman.

Fees Committee: Ford Bartlett, Chairman.

RICHMOND COUNTY CHAPTER

Mr. Fred H. Zurmuhlen, Jr., President of the Richmond County Chapter, has forwarded information that regular monthly Chapter meeting was held on June 9th.

A schedule of minimum fees for engineering services was submitted for consideration but was laid over for disposition until the first meeting in the Fall.

It was decided by the Chapter to embark upon an educational campaign among the institutions employing surveying services to appraise them of the fact that a schedule of minimum charges for surveys has been adopted by the Chapter and endorsed by the reputable surveyors of the County. This campaign will be undertaken by the Public Relations Committee under the Chairmanship of Mr. H. W. Ordeman.

An impression gleaned from the report was that the discussion became so animated that Mr. Zurmuhlen alternately occupied the Chair and served as sergeant-at-arms (both of which offices he is eminently qualified to fill). It is hoped that a treaty of peace will be signed before meetings are re sumed.

* * *

Raphael J. Smyth,
Chairman, Committee on
Chapter Activities.

Annual Convention

(Continued from Page 4)

for consideration of the Society, early next Fall.

The Chairman of the Committee on Resolutions, Arthur V. Sheridan, presented the following which were adopted:

* * *

ENDORSEMENT OF PUBLIC WORKS

Program of A. S. C. E.

WHEREAS, the Board of Directors of the American Society of Civil Engineers has set forth a definite proposal caling for the inauguration of a nationwide public works program as the only definite means of combatting the present economic crisis, and

WHEREAS, the said proposal directs attention to the critical situation facing the nation and suggests that the various measures now before Congress call for the collection of taxes from a people too impoverished to assure the consummation of the intent of such measures, and

WHEREAS, the proposal is in all respects a sane, conservative recommendation, and

WHEREAS, relief of the present condition is imperative if the standard American living and the ideals of the American social doctrine are to be preserved, now therefore be it

RESOLVED, that the New York State Society in meeting assembled at New York, May 21st, 1932, does hereby endorse the proposal of the American Society of Civil Engineers and strongly commends it to the attention of the public, the Congress and the President of the United States.

* * *

REDUCTION OF COLLEGE DEGREES

To a Logical Minimum

WHEREAS, there exists amongst the engineering schools and colleges in this State, as well as throughout the nation, the practice of granting degrees prefixed with varying descriptive terms intended to indicate specialization of engineering education, and

WHEREAS, there exists a considerable difference of procedure of time and of the quantity of subject matter required for the same degree in various institutions, and

WHEREAS, review of the curricula discloses the fact that approximately 75% of all engineering courses of equal length cover so essentially the same subject matter whilst the remaining part of the training more properly belongs in the category ordinarily designated as majoring, and

WHEREAS, no scholastic course is in itself sufficient to warrant designation as a professional man, and

WHEREAS, it is impracticable to train a man as a specialist without the foundation of a thorough general professional education, and

WHEREAS, the granting of numerous types of engineering degrees, many of them illogical and inappropriate, is unnecessary, unjustified and misleading, and

WHEREAS, the law of the State of New York recognizes engineering as a single profession, and

WHEREAS the professional engineers of this State have labored for many years to establish the unity of the engineering profession, therefore be it

RESOLVED, that the New York State Society of Professional Engineers recommends to the University of the State of New York and to the several engineering schools and colleges within the State, the adoption and recognition of a minimum number of scholastic engineering degrees, and be it further

RESOLVED, that the Society recommends that a general engineering course comprehending the mathematical and physical sciences, the fundamentals of all major branches of engineering and a liberal training in cultural subjects and leading to the degree of Bachelor of Engineering be established as the basis of engineering education in all registered schools and colleges of this State.

* * *

PUBLIC WORKS BY PRIVATE CAPITAL

Such as Bridges and Tunnels

WHEREAS there are in the State of New York, and particularly in the City of New York, projects essential to the development and general welfare of the State and its communities, and

WHEREAS, preliminary, and in instances detailed, studies and plans have been made and the feasibility and practicability of the projects demonstrated, and

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NEW JERSEY NEWS

OUR READERS SAY

The doctor's prescription, intended to check disease in its incipient stage, is seldom of any avail when the disease has become chronic, and a disagreement among doctors is usually a portent of the patient's early demise.

With industry at a standstill, with the unemployment problem knocking at our door, with all the misfortunes of the taxpayer in gruesome prospect, we heard last winter and this spring that something was going to be done about it; that this was the time when the banker, the captain of industry and the legislator were going to cooperate.

The leaders fulminated about existing evils and the necessity for burying politics and proceeded to prescribe the remedy. The bankers stated that the universal distress was due to an orgy of spending, to the automobile and super-highways, to the war and what not and that the financial troubles confronting New Jersey municipalities must be met by stopping public work; also that running expenses should not be met on borrowed money; that municipalities should limit expenditures to monies collected, to a cash and carry basis; that tax-anticipation loans were an iniquity and the habit should be discouraged and that an advisory committee of bankers should be set up in each county to pass upon all governmental financial programs. Thus the panacea of retrenchment and economy would lead to prompt recovery.

The answer of the municipalities, particularly those faced with realities and not theories, was that the general distress had deeper beginnings than municipal spending; that world financial leadership through its inept ness had crashed in 1929 and that no amount of explaining could pass the buck to the municipalities; that, as a matter of fact, needed public work was one practical way of providing for the unemployed, one sensible line of activity where with to help the taxpayer meet his taxes, one exemplary avenue for the stimulation of business and that the inability or unwilling ness of bankers to extend the customary and legally-necessary tax-anticipation loans was not cooperation. They pointed out for banker and legislator alike to see that the taxing calendar prescribed by state law, which forces municipalities to operate for months on borrowed funds, even paying school, county and state taxes in advance of collecting their own taxes, had started the vicious cycle which they and not the municipalities were solely in a position to ameliorate or correct. They urged the economists to consider the possible serious effects on the economic life of the state if public work were to cease and the effect on the banking business if the taxpayers were given the discounts in anticipation of taxes paid in advance, discounts that have heretofore been a substantial revenue for the banks; and they further gave instances of profiteering on the part of bankers and asked why New Jersey must pay 6% interest when municipal bond sales were reported in other states at from 4½% to 5½%.

Certain of our legislators have recognized that the faulty, time-outworn revenue producing mechanism for the support of local government is the cause of much of the local fiscal trouble and that such financial distress has not altogether been due to the credit situation. They have seen that the tax load of our municipalities must be shifted and put on a broader basis, thus lightening the burden on property.

The tax reform program for which so much was promised has been too big a dose for one swallowing for certain other legislators and as time has a habit of going on regardless, the legislature will have recessed, by the time this is published, without a solution and the patient still under ether.

When the bankers tell us that savings accounts have been at their highest in years; when we know that the fundamental structure of our country is sound; when we remember, if we have read our history aright, that we have won through other more critical times; when the youth and strength of the land is itching to get back to work; when the timid captains of industry need but put on their spurs, we regret that the legislature has not dealt courageously with the financial problem.

Is it the fault of the legislature? I heard it said of one of its members this winter, "He is a sap." I thought at the time—it is the fault of the saps who sent him there.

Out of eighty members of the present session only one is an engineer. If public works is truly a substantial part of the answer, why should it be left to one engineer, one technical man out of eighty lawyers, farmers and business men to accept defeat for the public works program—only one man to champion the cause of industry and the technically trained.

It is about time the engineers of the state wake up and take a hand.

E. W. K.

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PASSAIC COUNTY CHAPTER

Passaic County Chapter held its regular meeting at the Paterson Y. M. C. A. on Thursday night, May 26th, 1932. The session opened with a dinner which was followed by a lively and interesting business session.

The principal feature of the meeting was the presentation by Mr. Gerald W. Knight of the formation and work of the Tri-State Treaty Commission of New York, Connecticut and New Jersey in its efforts to abate the pollution of coastal waters. It is worthy of note in passing that the New York State Legislature has already passed the ne cessary bills providing for the required relief. Efforts are being made to secure similar legislation from the legislative bodies of New Jersey now in special session. Action in Connecticut cannot be taken until next year as its legislature meets bi-annually.

Arrangements have been made for the June meeting, which is also the annual meeting of the Chapter, to be held at the Passaic Elks Club on Thursday, June 30th, at which time Robert J. Wiseman, Engineer of the Okonite Company of Passaic, N. J., will describe the manufacture of electric cable.

Frederick H. Millen,
Secretary.

* * *

MEETING OF THE STATE BOARD

June 13th, 1932

A regular meeting of the State Board of Professional Engineers and Land Surveyors, was held at its office in Jersey City, N. J., on Monday, June 13th, 1932.

Two Certificates of Violation properly sworn to were acted upon by the Board and both were dismissed; one because the complainant had satisfied himself that the cause for complaint had been eliminated, and the second for the reason that the man holding himself out to be an engineer in the State of New Jersey had ceased so to practice.

The Board acted favorably on the request of the National Bureau of Registration to accept its certificate as evidence of qualification.

A special case referred to the Board involved a Land Surveyor who made a survey without complete information. The Secretary of the Board was instructed to notify the Surveyor in question that if he did not furnish the necessary information within a reasonable time, his license would be revoked.

Applications for license made by the following were acted upon favorably by the Board:

Percy S. Wilson, Joseph H. Keenan, George E. Schacht, Ramsey D. Kavanaugh, Charles S. Robinson, Clarence E. Myers, William L. Rice, Natale N. Papandrea, Latham C. Squire, Joseph A. C. Komich, Clarence R. Dapis, David R. Long, John B. Gribben, Frank L. Bradley, Delancey M. Hall, John F. W. Gebhardt, Harold D. Minor, Henry H. Selover.

(sgd) Hugh A. Kelly,
Secretary.

* * *

UNION COUNTY CHAPTER

To My Fellow Members in the Union County Chapter.

GREETINGS.

You have elected me to be your President for the ensuing year and if it were possible, I would like to sit down and have a nice comfortable chat with each one of you. But that cannot be, so I am going to ask you to consider this as my word to you, and then if you do not agree with me write, and give me your ideas. If you do agree with me, put your shoulder to the wheel and help me in my year in office.

There is no need of my telling you that we are in a period of depression. You know it. Because the country is in this condition we need the fellowship of our members, and where can

we get this better than at the meetings of the Chapter. Come out and encourage others and be encouraged in return. You will get out of it just as much as you put in.

You remember the history of the Chapter, which is not so very long; how it started with a few meeting in a room. From that small beginning the Union County Chapter has grown until today it is one of the most influential Chapters in the State. It is something to be proud of to be a member of such a Chapter.

During past years we have endeavored to make the meetings interesting: we have had discussions on pending legislation, which affected the profession and have been prepared to combat any adverse measures that were before the legislature; we have had subjects present that were of interest, yet not too closely identified with the daily routine, which enabled us to broaden our knowledge of subjects we should know about to the extent that we might at least have a talking knowledge of them.

I should like to make the coming year the most successful one in the history of the Chapter, and you have until the second Tuesday in October to make up your mind that you will do all in your power to make it so. This is a rather big contract because during the year just closed, the meetings were very well attended.

To those who supported the Chapter during the past years, and there are many, may I say:—Please do not let down any in your support.

Again I ask all in the engineering profession in Union County to get "Chapter Minded" and come to the meetings—only once a month—get acquainted and let us get acquainted with you. We need you. You need the Chapter.

D. C. MacDougall, President.

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MONMOUTH COUNTY CHAPTER

At the May meeting of the Chapter it was decided to suspend meetings for the summer months.

The Annual Clambake will take place in September. All are invited to attend and engineers are especially urged to bring the ladies.

The object of the Clambake is the promotion of acquaintance and fellowship.

The Committee in Charge is composed of Messrs. Martin, Seaman and McKee. Full details, including date, location and price of tickets, will be announced later and will appear in this publication.

Make your reservations now by addressing Leo J. McKee , Secretary-Treasurer, at 16 McLaren Street, Red Bank, N. J., or any of the above named committee.

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BERGEN COUNTY CHAPTER

Bergen County Chapter's May meeting, the last of the season, was a dinner meeting held May 26, at the Elks Club in Hackensack.

Due to the receipt of two committee reports, practically the entire evening was taken up in the discussion of these matters.

A committee appointed at the previous meeting at the request of the Bergen County Planning Commission, reported on its findings in regards to the scales to which Planning Board Maps in the County are being drawn, and presented as its recommendation the scale 1" equals 300' for Master Plans and the scale 1" equals 3000' for the County Master Plan. Discussion was on a suitable standard scale for working drawings.

Mr. H. O. Pond, Chairman of the County Planning Commission, guest of the occasion, thanked the Chapter for its efforts in behalf of the Commission and also gave a short talk on the purposes and aspirations of the Commission.

The next report, a symposium by the Chapter's Fee Revision Committee, of which Mr. Arthur Noack is Chairman and entitled "Tentative Standard Specifications for Engineering Work," was presented for a first reading. The task of setting up standards was undertaken for the purpose of outlining definite requirements for work on specific types of municipal engineering and survey work; also among other things to so classify the various types of work as to permit the prospective client to know what he may expect and what he is being charged for.

Considerable discussion was had as to whether prices, which are yet to be determined, should be a minimum based on market conditions or a minimum based on a low overhead of some practitioners. In this connection it was pointed out that the concern able to offer superior service will be able to get fees commensurate with both the service demanded and that rendered.

Special meetings during the summer months are at the call of the President. The next regular meeting will b held sometime in September. Notice of the date and proposed program will appear in these columns.

W. M. Schirra, Secretary.

Annual Convention

(Contained from Page 10)

WHEREAS, there are not available at this time sufficient funds for these projects, and

WHEREAS, the consummation of such projects would create additional source of revenue and enhance the values of property, and

WHEREAS, there are, in many instances, private funds available for projects permitting a revenue in the form of tolls, and

WHEREAS, the prosecution of bridge and tunnel programs would provide employment and serve to relieve the present unhappy situation, as well as increase revenues and property values, now therefore be it

RESOLVED, that the New York State Society of Professional Engineers in meeting assembled at New York, May 21, 1932, does record itself as advocating the use of private funds for the projects above referred to, and urges that the State, together with the various cities, towns, villages, counties and other political subdivisions thereof, negotiate legally for the right to enter into contract relations whereby a reasonable return for a definite period of time be permitted to the private investors of capital, with the agreement that the completed project shall at the end of the stipulated time, become the property of the governmental agency which is party to the same agreement.

PROJECTS POSSIBLE BY FINANCE CORPORATION

To Relieve Unemployment

WHEREAS, it is universally conceded that the present lack of employment has assumed proportions dangerous to the community and to the nation, and

WHEREAS, it is equally conceded that the buying power of masses of the community and nation must be increased to avert what is perhaps the most serious crisis in the history of the United States, and

WHEREAS, the construction of public and private projects is unquestionably the surest, and apparently the only, means of reducing the number of unemployed and correspondingly increasing the buying power of the masses, and

WHEREAS, there are certain considerations of life and health which cannot be menaced even under present conditions, and

WHEREAS, the postponement of certain projects such as the proposed three hundred million dollar Water Supply and a one hundred and sixty million dollar sanitation system for the City of New York, is a procedure dangerous to the community and holds forth the possibility of famine and disease, and

WHEREAS, the plans for such projects have been developed to the stage wherein contracts could be let, and

WHEREAS, a project such as the Water Supply System is on a self-sustaining basis, therefore be it

RESOLVED, that the New York State Society of Professional Engineers urges the City of New York to make application to the Reconstruction Finance Corporation to provide the funds for the consummation of the said self-sustaining Water Supply System and similar projects.

CONVENTION OF NATIONAL COUNCIL OF STATE BOARDS OF ENGINEERING EXAMINERS

WHEREAS, the National Council of State Boards of Engineering Examiners will hold its 13th Annual Convention in New York on September 29th and 30th and October 1st, 1932, and

WHEREAS, this Council is an outstanding, directing influence in the movement to establish high requirements for admission to practice, and to secure recognition for the profession of engineering, and

WHEREAS, this Council is composed of the representatives chosen by the profession of twenty-five states of the Union, and

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GENERAL NEWS

THE BRIDGE BEAUTIFUL

1932 Awards

A committee designated by the American Institute of Steel Construction has selected what, in its opinion, are the most beautiful metal bridges opened to traffic during the year 1931.

Awards were made in three classes, designated as "A," "B" and "C" according to the cost and magnitude of the structure selected.

The committee's bridge beautiful for class "A," costing in excess of $1,000,000, is that across the Kill Van Kull and connecting Bayonne, New Jersey, with Staten Island New York. It is the longest arch in the world, with a main span of 1675 feet from which is suspended most of the floor system. Class "B" award for structures costing between $250,000 and $1,000,000 went to the Waldo-Hancock Bridge across the Penobscot River at Bucksport, Maine, with a main suspension span of 800 feet. The West Stewartstown Bridge over the Connecticut River at West Stewartstown, New Hampshire, a deck arch structure with a main span of 136 feet, was awarded the class "C" distinction for structures costing less than $250,000.

To Othmar H. Ammann, principal author of the famous George Washington Bridge, and his associates must be credited the design of the Bayonne Bridge. The Waldo-Hancock Bridge was designed by the firm of Steinman and Robinson, who won last year's major award with the beautiful Mt. Hope Bridge of Rhode Island. The West Stewartstown Bridge is the work of the New Hampshire State Highway Department.

It is a source of pleasure to note that Dr. Amman and Dr. Steinman and their associates have again been recognized for their creative genius. One cannot but observe, and wonder in doing so how it is possible, that the George Washington Bridge was passed over. Reasons for such action are given, but what rules or objective criteria can be used to judge a structure that so far surpasses ony other. To the person in whom the mind and soul are closely associated it presents that which instinctively compels those emotions which respond in ecstasy to the sublime poetry of Dante and Shakespeare, to the incomparable music of Wagner and Verdi and to the sunrise on one of Nature's crests reaching into the mists above the observer. It transcends appreciation or beauty based upon standards. Like Niagara it permits of no comparison.

Congratulations Dr. Amman and Dr. Steinman. You and your collaborators have done more than build great structures. You have demonstrated that the engineer is a great artist who creates beauty in a three dimensional space, even as does the painter on a two dimensional canvas, the poet in his lines or the composer in his harmony. Some day perhaps, when the mind's eye of man is as fully developed as are his senses he will recognize the genius which conjures up and creates in imagery that which is to be brought into existence for the use and admiration of mankind and the names of Amman, Steinman and many other engineers will take their places as immortals in the annals of time.

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AMERICAN SOCIETY OF CIVIL ENGINEERS

Civil Engineering—June, 1932

The current issue of the official publication of A. S. C. E. contains, in addition to the Public Works program proposed by the Society, a number of interesting articles. This is especially true of some comments relevant to matters appearing in previous issues.

62nd Annual Convention

The Summer meeting of the Society will be held on July 6, 7, 8, and 9 at Yellowstone Park. A complete outline of the Convention, together with costs and details, appear in the June number of Civil Engineering.

* * *

AMERICAN ASSOCIATION OF ENGINEERS

Annual Convention—Sept. 26-27-28

The 1932 Convention of the American Association of Engineers will take place in Washington on the above named dates.

Donal L. Chamberlin, President of the A. A. E., has sent out an appeal urging engineers who can to arrange their vacations so as to participate in the Convention.

* * *

AMERICAN SOCIETY OF MECHANICAL ENGINEERS

Mechanical Engineering for June a Splendid Publication

The latest issue of Mechanical Engineering is strongly recommended to engineers and thinking persons in general. Seldom does the engineer appear to greater advantage than in this publication which contains abundant evidence of his breadth of vision, cultural knowledge and ability to use logic.

* * *

SOCIETY OF AMERICAN MILITARY ENGINEERS

The Military Engineer—May-June, 1932

As usual the Military Engineer rates its position as one of the finest magazine publications on the market. Its set-up is unexcelled amongst modern publications and its subject matter is invariably presented in a scholarly as well as concise and interesting manner.

"A Glance At Germany" by Major B. T. Reynolds is especially worth reading.

CONNECTICUT CONFERENCE

Elects State and Chapter Officers

The press of Connecticut contains the following interesting news relevant to the progress of the movement to organize a State Society of Professional Engineers and Architects.

NEW ORGANIZATION ELECTS OFFICERS

Plans Discussed by Engineers and Architects to Make Society State-wide

A proposed set of by-laws and a constitution for the Connecticut Conference for Registration of Engineers and Architects, recently organized in Stamford, was presented to the membership last night at a meeting in the office of City Engineer Willard S. Conlon when plans were discussed toward making the organization Statewide in its scope to secure proper legislation to effect the registration of all engineers and architects in the State.

Officers Elected

With this in view temporary State officers were elected last night as follows: Willard S. Conlon, president; R. Lincoln Hedlander, vice-president; J. S. Kelly, secretary, and A. Mausaloff, treasurer. Directors named were Charles P. Rumpf, Nelson E. Emmens, J. W. Bailey and Z. F. Capabianca. Fairfield County Chapter officers named last night are J. W. Bailey, president; Llewellyn Bromfield, Jr., vice-president; F. G. C. Smith, secretary; Charles White, treasurer. Directors are H. L. Coggins, C. C. Moser and E. Irvine Rudd. Mr. Conlon was named as chairman of the publicity committee and Mr. Hedlander was named as chairman of the membership committee.

To Safeguard Life

The purpose of the organization, as set forth in the preamble of the constitution, is to safeguard life, health, and property by restricting the practice of engineering and architecture to properly qualified persons; to promote the welfare of the engineering and architectural professions through the creation and enforcement of adequate license laws and practice acts; to place the control of engineering and architectural projects within the scope of such laws and acts; to focus public attention upon the functions, requirements and accomplishments of these professions, and to sanction honorable procedure tending toward emoluments commensurate with the dignity and responsibility of the profession.

Keep In Office

It is the plan of the organization to keep in office the temporary State officers until such time as a State organization, taking in all towns and cities, can be perfected through organization meetings in different sections of the State.

Comment: The New York State Society is complimented by the ac-

ceptance of its form of organization and preamble of purpose by Conecticut. Perhaps ere long the American Engineer may be privileged to carry official news from the newly formed society. In the interim best wishes for deevlopment and expansion of the Connecticut Conference which hopes for a membership of 1,000.

* * *

NATIONAL COUNCIL OF STATE BOARDS OF ENGINEERING EXAMINERS

Thirteenth Annual Convention Preliminary Announcement

Date:

September 29, 30 and October 1, 1932. These dates will make it convenient for delegates to attend the following meetings also: American Association of Engineers meeting in Washington, D. C., September 26, 27 and 28, and American Society of Civil Engineers meeting in Atlantic City, October 5 to 8.

Place:

New York City. Hotel Pennsylvania has been selected as convention headquarters. The rates are $4.00 to $8.00 for single rooms and $6.00 to $12.00 for double rooms. Reservation cards will be furnished later.

Transportation:

Special excursion railroad rates will be available at the time of this convention. Further information regarding rates will be furnished with final convention announcements.

Program:

A constructive and interesting program is being prepared. This will include reports and discussions on accredited engineering schools, uniform examinations for registration, National Bureau of Engineering Registration, model registration law, and Engineers' Council for Professional Development. The New York State Society of Professional Engineers is making preparations for entertaining the delegates and the annual banquet will be an outstanding feature.

Delegates:

It is hoped that every State Board and all national engineering societies will be represented at this important meeting and you are urged to appoint your delegate as soon as possible and furnish this office with his name and address.

Respectfully yours,
(sgd.) T. KEITH LEGARE,
Secretary.

The New York State Society will be host to the National Council of State Boards of Engineering Examiners. Past President Sheridan has been requested to act as Chairman of a special Committee on Arrangements. Further details will be announced later.

* * *

INTERPRETING COLORADO ARCHITECTS ACT

By Laws of Board of Examiners

The following article abstracted from the Pacific Builder and Engineer of April 16th, offers some interesting suggestions to Licensing and Registration Boards as well as to engineers generally:

Governing Architects

Definitions of certain acts forbidden by the Colorado state law regulating the practice of architecture, such as gross incompetency, reckless, dishonest, fraudulent or deceitful practice, have been incorporated in additional by-laws of the state boards of examiners, adopted at a recent meeting. The text of the new by-laws follows:

"Defining certain acts which will be considered as gross incompetency, reckless, dishonest, fraudulent or deceitful practice within the meaning of the act.

"Failure to use diligence in preparing contracts or other documents for the protection of a client shall be deemed recklessness in the construction of a building. Failure to use due diligence in planning or supervising a structure, resulting in the building being improperly constructed, shall be deemed recklessness in construction.

"If failure to protect client in preparing contracts and other documents is due to causes other than lack of due diligence, it shall be deemed gross incompetency. If the planning or supervision of the construction of building by the architect results in faulty or improper construction, said architect shall be deemed grossly incompetent.

"Any architect may be deemed guilty of dishonest practice if he pay any money or give anything of value to any officer or employee of the State of Colorado, or of any county, state, municipality or school district within said state, for aid and assistance in securing work from the political subdivision which he represents or is employed by.

"If any architect has secured a contract on any work, it shall be deemed dishonest practice for any other architect to attempt to supplant him so long as this contract be in force.

"It shall be deemed dishonest practice for any architect to stamp the drawings for another, or to stamp any drawings other than those made at his own office, or under his personal supervision.

"It shall be deemed dishonest practice to publicly announce, or permit to be so announced appointment as architect for any project unless a definite agreement with the owner exists."

COMMENT: Certain measures of discipline, such as are generally encountered in the administration of medical and legal Practice Acts, should receive the attention of engineers.

* * *

INTERNATIONAL CONGRESS

For Scientific Management

The fifth International Congress for Scientific Management will take place in Amsterdam, Holland, July 18th to 23rd, 1932.

Eighteen countries will participate.

The United States will send representatives from the American Society of Mechanical Engineers, the Society of Industrial Engineers and the American Sociey of Agricultural Engineers and other non-engineering groups.

PRESIDENT OF BROOKLYN POLYTECHNIC INSTITUTE

Resigns to Become Head of Drexel Institute

The press of June 14th carried the following item, which is of interest not alone to the alumni of the Institute but to all engineers:

DR. P. R. KOLBE NAMED DREXEL INSTITUTE HEAD
Appointment of Brooklyn Polytechnic President Announced at Commencement in Philadelphia

Philadeluhia, June 13. — Dr. Parke R. Kolbe, President of the Polytechnic Institute of Brooklyn, has been named president of Drexel Institute in this city to succeed Dr. Kenneth G. Matheson, who died last November. The announcement was made today by J. Rodman Paul for the board of trustees during the Drexel commencement exercises, at which Dr. Kolbe was the speaker.

"It is perfectly apparent," Dr. Kolbe said, "that engineering education is about to go through much the same process of eliminating the unfit schools and standardizing the survivors as was experienced during the last quarter century in the professions of law and medicine."

He addressed 231 graduations who received degrees in course. Diplomas and certificates were presented to fifty-four others.

Dr. Kolbe will assume his position here Oct. 1 next. Before going to New York in 1925 he was president of the University of Akron (Ohio) for twelve years. He is a past president of the Association of Urban Universities and is the author of "The Colleges in Wartime and After," and other works.

He studied educational conditions in Hawaii in 1919 and a member of the Federal School Survey Commission and was one of a group of educators invited to study education in Soviet Russia a few years ago. He was born in Akron in 1881.

Congratulations and best wishes Dr. Kolbe.

* * *

STEVENS INSTITUTE SUMMER CAMP

For Prospective Engineers

The A. S. M. E. News Bulletin of June 7th carries an announcement, which has appeared in substance elsewhere many times during the past few months. It is, however, of sufficient significance to warrant reprinting as a message to those who may wish to avail themselves of a splendid opportunity.

STEVENS TECH TO RUN COLLEGE CAMP FOR PREP SCHOOL BOYS

From August 13 to 27 Stevens Institute of Technology will hold its second college camp for preparatory school boys. This camp in northern New Jersey is planned to help these boys make an intelligent choice of the type of college and career, and to enjoy the process while doing it.

The major fields of modern engi-

neering will be described to the boys in camp by a group of distinguished visiting lecturers. While one will throw the spotlight on chemical engineering, others will do the same for mechanical and civil engineering, etc., while still others will talk of aeronautics, railroading, and of executive and management problems.

There are no sure ways of forecasting a boy's future, no infallible way of measuring his abilities, but useful evidence can be had. Special aptitude and group tests will be given the boys and the results discussed with them, the purpose being to make each boy realize that choosing a type of college is a matter to be approached with seriousness and intelligence.

High-chool and preparatory-school students, preferably those planning to enter college in 1933, are eligible. Applications for admissions should be sent to the President's Office, Stevens Institute of Technology, Hoboken, N. J.

* * *

DR. AMBROSE SWASEY HONORED

Receives Franklin Medal

Honorary membership together with the Franklin Medal was awarded to Dr. Ambrose Swasey, Past President of the American Society of Mechanical Engineers, at the May 18th meeting of the Institute.

Dr. Swasey was the inventor of a range finding device widely used during the late war. Upon the occasion of his award he delivered an address entitled "Astronomers and Their Telescopes."

Congratulations, Dr. Swasey, from the American Engineer.

* * *

DISPLAY OF LICENSE AND USE OF SEAL

Engineers and Officials to Enforce

Section 1450 of the Engineers' License Law reads in part as follows:—

Every holder of a license shall display it in a conspicuous place in his principal office, place of business or employment.

Every licensed professional engineer or land surveyor may have a seal, approved by the board, which shall contain the name of the professional engineer and the words "licensed Professional Engineer" or the name of the land surveyor and the words "Licensed Land Surveyor" and such other words or figures as the board may deem necessary. All plans, specifications, plats and reports prepared by or under the supervision of such licensed professional engineer or land surveyor shall be stamped with said seal when filed with public officials. No official of this state, or of any city, town or village therein, now or here after charged with the enforcement of laws, ordinances or regulations relating to the construction or alteration of buildings or structures, shall accept or approve any plans or specifications that are not stamped with the seal of a licensed architect or licensed professional engineer.

The announcement below is published as a suggestion and guide for engineers and officials throughout this State:—

State of New York
Department of Conservation
WATER POWER AND CONTROL COMMISSION
Albany

Water Supply Applications
Engineers Seal on Plans Filed

At the last session of the Legislature Article 55 of the Education Law relating to the licensing of engineers and surveyors was amended by Chapter 468 of the Laws of 1932.

The provisions of this amendment are such that when plans, specifications, contracts and reports prepared by a professional engineer are filed with the Water Power and Control Commission in water supply matters or other matters wherein such plans, etc., are necessary, these plans cannot be accepted by the Commission unless they bear the seal of the engineer stamped upon them, unless it appears from the petition or other papers in the matter that the contemplated expenditure for the complete project will not exceed Five thousand dollars.

WATER POWER AND CONTROL COMMISSION
(sgd) B. R. Suter,
Executive Engineer.

May 10, 1932.

* * *

BEAVERS AS ENGINEERS

A Newspaper Article

A recent Editorial of the New York Sun offers some interesting reflections upon an engineering quadruped, under the following caption:

"Engineering Note"

Beavers always have appealed to the imagination of men on account of the extraordinary skill they show in building their houses and dams; they proceed as if they were equipped with human intelligence. By some they have been regarded as pests because they strip trees of bark for food and cut down others for dams. However, Dr. Albert S. Hazzard, formerly of Cornell University, who has conducted stream and lake surveys for the Bureau of Fisheries, regards beavers as valuable coworkers in the forests. He found that their habit of making pools behind their dams in mountain streams increases the plant and insect food available for fish. He says that in the United States beavers are doing for nothing what requires considerable expenditure in England, where such pools are artificially formed. In Utah particularly the animals are aiding the bureau in fish culture. Because of this, Dr. Hazzard recommends that beavers be protected where conditions warrant it. New York State has protected beavers zealously for years, and colonies planted by game wardens are safeguarded, even where their ponds sometimes overflow neighboring highways.

Beaver fur was sought so eagerly in the days of beaver hats and methods of trapping were so wasteful that the animals were almost exterminated; they disappeared from many parts of the country. They probably would have been wiped out completely but for the invention of silk plush applied to the making of hats.

PRESS COMMENDS THE SOCIETY

For Campaign Against Misuse of "Engineer"

The New York American of May 24th, 1932, printed the following in its editorial columns:

"Who's An Engineer?"

The State Society of Professional Engineers is well advised in its campaign to stop the misuse of the term "engineer" by persons who have no ethical claim to that title. The evil has done much to falsify the standard of values.

Engineering requires "an intensive knowledge of science, materials, machinery and the laws of mechanics."

Plumbers, rat catchers and tray checkers–by calling themselves "plumbing engineers," "rodent engineers" and "food engineers'—have magnified their callings almost to the rank of a learned profession. What's in a name? Much.

The above comment is gratifying and gives needed approval to the efforts of President Steinman and the Society to protect the title.

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Annual Convention

(Contained from Page 12)

WHEREAS, the Chairman thereof is the President of the New York State Society of Professional Engineers, and

WHEREAS, the distinction shown New York is a compliment to the profession of this State, now therefore be it

RESOLVED, that the New York State Society extends felicitations to the National Council of State Boards, and be it also

RESOLVED, that the New York State Society shall place its facilities and services at the disposal of the said Council, and be it further

RESOLVED, that the Society shall co-operate with National Council and participate in its deliberations and festivities.

* * *

Mr. McKenna called attention to the fact that the incorporation of the Society makes necessary the replacement of existing Chapter Charters. On motion it was voted to recall the certificates now in possession of Chapters and to replace them with appropriate Charters.

At 5:45 P. M., the assemblage was turned over to the Reception Committee and "Little John Avery" took control for the period between the meeting and the dinner. Dr. John's counsel and tonic gave much needed refreshment to the somewhat tired and jaded spirits who had endured the temperature of an unusually warm day. A meeting without John's services would be incomplete.

DINNER AND DANCE

The annual dinner began at 7:15 in the evening. There were four principal speakers: His Excellency, Dr. Hawkling Yen, Charge' d'affairs of the Chinese Legation at Washington, told of China's engineering awakening and activities, particularly in the building of roads, and what the same meant not alone to that ancient nation but to the world. He spoke of America's part in these undertakings and praised the splendid contributions of the China Famine Relief of the U. S. A. whose American engineers and American funds made possible many of the modern roads and arteries of travel in China.

Mr. Arthur Noack, President of the New Jersey Association of Professional Engineers, discussed the advantages of co-operation between State Professional Societies and the need for engineers to take an active part in civic and political affairs of nation, state and city.

Mr. J. P. H. Perry presented in an appealing way the work of the Professional Engineers Committee on Emergency Employment of which he is the Chairman. The dire conditions which have been encountered by that Committee and its heroic efforts to stem the tide of starvation and strife were recounted in a manner that should convince any one of the inefficacy of psychological theories in combatting the war against depression. Mr. Perry was warmly commended by another speaker for his tireless efforts and personal sacrifices.

The final speaker was E. J. Mehren, President of the Portland Cement Association, who delivered one of the most illuminating, forceful and frank addresses upon the country's sad plight that any group has been privileged to hear. He called upon engineers to manifest disapproval of the political manoeuvres that were being indulged in while millions plead for the right to work and to live. As is recognized by all sincere persons work must be provided in order to prevent starvation and strife. It is the duty of government to make this provision. The people of the nation should, in his opinion, register themselves strongly against the propaganda of the U. S. Chamber of Commerce and other groups who reflect the opinions of great financial interests and internationalists, regardless of the welfare of the great mass of American citizenry and the nation whose sons have in the past so willingly sacrified their lives that the people as a whole should be free and contented.

Vice-President Arnold Chapman spoke on "Albany" and invited every one to attend a three-day celebration in connection with the formal opening of the Port of Albany.

For the first time the Society was honored by the presence of Mrs. D. B. Steinman who graced the dais with her distinguished consort.

President Steinman acted as toastmaster and introduced the speakers with the exception of His Excellency, Dr. Yen, who was presented by Past President Sheridan.

After the dinner dancing was in order until the early morning.

THE COMMITTEE

To Fred H. Zurmuhlen, Jr., Chairman, as well as to Thos. Normile, John Avery, George Meeteer, Treasurer Corry, Assistant Secretary Stubbs and other members of the Committee in Charge of the Convention, the Society voices its appreciation. Such work is a labor of love upon which depends a great deal. Again Fred and fellow members of your Committee—Thanks for your fine endeavors.

Unemployment

(Continued from Page 7)

VI.—Catastrophe due to the whims of a large proportion of a population, such as:

(a) Desire for quick gain resulting in inflated values, followed by rapid liquidation.

(b) Fear of loss resulting in frozen values.

(c) Desire to accumulate resulting in hoarding.

(d) Desire to possess, resulting in inflated credits, over-purchasing, market saturation stagnation.

Region affected frequently large.

Cause difficult to control by reason of the attitude toward personal freedom.

VII.—Catastrophe due to rapid change in mode and method, thus causing obsolescence in large groups of facilities.

Region effected generally large.

Cause controllable.

Economic Loss with proper adjustment can be in a measure minimized by proper balancing.

The term "Catastrophe" as justly applied may in some instances seem too drastic, but as a matter of fact it is not. Catastrophe is a result not a cause. For instance: A valley of great area may be flooded but if the valley is so situated that its flooded area is uninhabited and there is no resultant loss of life or property, there is no catastrophe.

During a period of little more than a decade every important nation of the world has experienced, and is simultaneously suffering from a combination of practically every form of catastrophe just outlined, and the United States of America is no exception. Therefore, the present state of affairs is not surprising even though it is appalling.

We are suffering an epidemic. How can it be treated and how can a reoccurrence be in a measure prevented? This country by reason of international relations can only treat with this trouble within its own borders. So let us see what we are afforded to work with and how to work:

I.—We possess practically all of the resources requisite to the sustainance and luxury of a vast population.

II.—We possess agricultural, manufacturing and distributing facilities proportionate to our market demands, or we are capable of developing them as the need becomes apparent.

III.—We have a population of approximately 120,000,000 people, wherein lies a vast market for articles we produce or are capable of producing.

IV.—Our population is accustomed to a rate of pay and standard of living which surpasses that of the populations of other nations of the world.

And yet these seeming advantages

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have not been sufficient to effectively combat a great measure of disastrous disturbance to our economic balance.

Why?

That is a question, the answer to which is governed by difference in individual and group opinions, to say nothing of self-interest, and, the correct answer will no doubt be complex and mayhap in a measure distasteful.

However, as a start toward finding a lasting remedy for our ills let us examine the barter and trade of commodities within our border.

As previously pointed out we have the advantage of a vast domestic market. Is this market in every possible instance being supplied by domestically produced articles? Have we in every instance provided, to the utmost, encouragement for the domestic production of such articles?

The answer to these two questions is a very emphatic NO.

First: Our purchase of articles is in a great measure prudently governed by price and it is well known that many imported articles are sold in this country at a price which is less than the production cost of similar articles of domestic manufacture.

Second: That wage rates in many foreign countries are so low that their commodities undersell similar domestically produced articles in our home market regardless of the protection afforded to our enterprises by means of the levy of tariffs on imported articles.

Therefore, in order to restore and permanently stabilize domestic activities to the point of continuously affording a normal amount of employment to our population, it is evident that we are faced with the necessity of devising a more effective means of encouragement and protection or we will be forced to accept rates of pay for our personal services and investment of capital sufficiently low to be commensurate with those of foreign countries whose goods can undersell domestically produced articles in our home markets.

As a guide toward formulating such protection, it must be remembered:

(1). That practically every producing nation of the world is striving for commercial supremacy in their home and foreign markets;

(2). That many, if not all of the producing nations, the prevailing wage is somewhat less than that in the United States of America;

(3). That in many foreign nations the distance between points of origin of raw materials and points of manufacture are in general considerably less than in this country;

(4). That practically every nation has its own unemployment problem and is therefore seeking ways and means of providing employment for its own population;

(5). That while tariffs on import duties when properly balanced are highly beneficial from the standpoint of affording a measure of protection to domestic enterprise and providing a federal income, some additional protection of another form may prove advisable;

(6). That regardless of obstacles we must provide gainful employment to those of our population who desire to work, and our standard of living must be maintained at a high rather than a lavish level.

As previously pointed out, to attain our end we mnst study and analyze many factors and our final plan must be comprehensive and flexible. Therefore, let us investigate each and every one of our domestic produces whether raw material or finished articles, separately tabulate and chart the annual production thereof in the unit of measurement customarily applied to each, beginning with as remote a period as practicable. Also, in like manner set up every article imported and every article exported. (Practicallly all of the information necessary to such a procedure can be obtained by combining that which is available in the files of the Department of Commerce and Labor, the several commercial statistical bureaus and trade publications.) Then by proper balancing there will be revealed our apparent total annual consumption of goods over a long period of time, together with any surplusages and deficiencies in domestic production.

By compiling and analyzing coincident data as to wage rates, sales prices, duties, taxes and out population, the several market relations and reactions would be revealed together with the per capita purchase of finished articles, trend of normal market growth and preferences for specific articles. By projection the market requirements could then be forcast from time to time with an applicable degree of accuracy.

Hence, there would be founded the basis for a control of our domestic activities so that when developments indicated a deficiency in any lines of domestic products, production thereof could be encouraged and protected not alone by means of tariffs in moderation but also by means of a limitation placed on imports. Thus, minimizing the detriment caused by sale in our markets of articles of foreign origin in competition with domestic products which serve the same purposes.

When developments indicated a surplusage likely to occur in domestic products, beyond the absorbative capacity of the domestic market, foreign outlets could be arranged, or in certain instances the facilities used in preparing such products could be converted to uses incidental to overcoming previously referred to deficiencies.

Such a plan, however, could function only under the direction and control of some such body as a National Board of Trade vested with the necessary authority by means of legislation. Institution of such methods would no doubt cause considerable protest on the ground that it would establish a form of national dictatorship in business. One answer to such protest is that the Interstate Commerce Commission, in its regulation and control of our railroads, has proved to be extremely beneficial, as also have been our several state utility commissions within their spheres. Another protest would no doubt spring from the thought that our international barter and trade would be limited to the point of destruction. One answer to that protest is that at present our foreign outlets for domestic products are not healthy, and that imports of foreign articles are decidedly injurious to domestic producers. Furthermore, it must be remembered that a considerable import business would be maintained by reason of the fact that many articles required for domestic consumption are not obtainable through our own resources. Likewise many articles produced in this country are equally essential to foreign purchasers. Therefore, a considerable export business would also be maintained.

A significant point to bear in mind is one but recently mentioned in the public press, that previous economic depressions in this country have been caused by upsets to our domestic market rather than upsets in our foreign markets.

The functioning of such a board as just outlined is not an entirely new idea to economists, but it has been rather tabooed on the ground that big business would not like it and, furthermore, the needs in the past did not seem to be sufficient for such to be warranted.

At present, however, big business is in a quandary and the state of affairs as manifest throughout the entire world is such that every nation must economically protect itself. This country is no exception, and our population by bitter experience has become educated to the point of realizing the necessity of evolving a plan to stabilize the employment of individuals and funds.

This plan if properly developed would be feasible and fair inasmuch as no regulation could be imposed unless sound mathematics revealed such regulation advisable. Thus the haphazardness of the past would be in a great measure eliminated. In fact, the Government of France has found a similar plan quite advantageous in regulating its flow of commerce to suit its national needs.

COMMENT: The above thesis is a splendid example of the engineer's ability to analyze some of society's problems, and lends weight to the proposal to hold a forum wherein he may be given an opportunity to present his views.

Surely the public is becoming tired of the peurile theories, formulae, excuses, extenuations and unfulfilled prophesies of political economists, financiers, sociologists and other self-styled experts, who thunder forth arguments, the promises of which even a school.

Why not permit the Engineer to offer some suggestions. He certainly cannot fail worse than those whose sophistry is being offered as a substitute for food and the right to a decent livelihood.

* * * * *

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The Pyramid of Cheops

(Continued from Page 8)

cover when it was in a closed position. The holes in the cover did not pass through its entire thickness. They were on the inside and nothing could be seen on top.

It has been mentioned before that the cover of the sarcophagus of Cheops was not found, and it can be judged that it was not broken up by intruders. That led to the idea that the sarcophagus was really intended to be a standard measure. The answer is that the sarcophagus, as it stands, is made like other sarcophagi; it has the three higher vertical sides with the inside bevels, it has the holes in the lower vertical side; in short, everything is arranged to receive the cover. The conclusion is evident. Furthermore, whoever saw in the sarcophagus the origin of the old English quarter, included in his figures the volume of the cover. Finally, the old English quarter is not an absolutely fixed quantity.

Some other mysteries identified with the pyramid of Cheops are that the height of the pyramid has a certain ratio, expressed in a round figure, to the circumference of the earth; that the perimeter of the base is 36524 pyramid inchs (the "pyramid inch" must have been chosen so as to fit this condition). which figure, divided by 100, would give us the number of days in a year; that the height of the pyramid, likewise expressed in "pyramid-inches" and multiplied by 10 to the ninth power would give us the distance of the earth from the sun in miles; that the meridian through the pyramid divides all land-surface on earth into two equal parts; that the density of the earth can be figured from the dimensions of the sarcophagus; even the atomic weights of the elements were found by juggling patiently enough with some figures.

It is evident that as long as there is a good will, almost anything can be found mysteriously hidden in the pyramid. To those who see in this pyramid the work of Divine Revelation we can only say that God would hardly reveal Himself to us by means of mathematical puzzles. On the other hand, those who claim that the early Egyptians had an advanced knowledge of the natural sciences are disproved by archaeology. They seem to have the subconscious idea that the Egyptian architect, knowing that the civilization of his country was about doomed, cleverly hid the highlights of Egyptian science in the dimensions of the different parts of the pyramid and trusted that in the 19th century A. D., some clever puzzle solvers would come and unravel the riddles.

The "great pyramid" contains three chambers at different elevations: a subterranean chamber, cut into the rock underlying the pyramid, the so-called "queen's chamber" and "king's chamber." The subterranean chamber is unfinished. Mr. Borchardt attributes this arrangement to two changes of design. Originally a subterranean burial chamber was planned with some structure over it. This plan was given up before the chamber was finished. The second plan called for a burial chamber at a higher elevation, built within a pyramid. This plan likewise was given up after the chamber had been finished and the two air-shafts had been started. The third plan was finally carried out. The three chambers should consequently be called the unfinished chamber, the abandoned chamber, and the burial chamber! It was not customary in Egypt to bury the queen in the same pyramid as the king. She had her own, a smaller, pyramid.

We must mention in favor of the pyramid of Cheops that it was laid out very accurately. The Egyptians were compelled by nature to be painstaking surveyors, if we may be allowed to use this word. They had a constant problem on their hands: the yearly recurring floods of the Nile. Whenever they undertook a construction they made a good job of it. And this is especially true of the great pyramid. As far as science was concerned, they were too practically inclined to achieve very much. It remained for the philosophical Greeks to develop the science of mathematics.

LICENSES GRANTED

March 18, 1932

Brandt, Arthur W.
Albany, N. Y.

Brown, C. Wilson,
Albany, N. Y.

*Burwell, John H., Jr.
Schenectady, N. Y.

Crowe, John J.,
Jersey City, N. J.

Douglas, Leighton W.,
Watertown, N. Y.

Engell, Roy,
Schenectady, N. Y.

Ferrauto, Paul,
New York, N. Y.

Genthner, Rudolph K.,
Rochester, N. Y.

Johnston, Harry H.,
Brooklyn, N. Y.

Kanner, Abraham,
New York, N. Y.

Kaufman, Harry E.,
Brooklyn, N. Y.

Leitner, Leopold,
Bronx, N. Y.

McLaughlin, Harold J.,
Brooklyn, N. Y.

*Newcomb, James L.,
Franklin Square, L. I.

Okun, William H.,
New York, N. Y.

Pearce, Kenneth E.,
Poughkeepsie, N. Y.

Rubin, Joseph L.,
Astoria, L. I.

Samson, David T.,
W. New Brighton,
S. I.

Schoenfeldt, Wm. C.,
Bronx, N. Y.

Siegel, Louis B.,
Bronx, N. Y.

Taylor, Jackson H.,
Hartsdale, N. Y.

Wilson, Alfred J. P.,
Brooklyn, N. Y.

Wilson, David E., Jr.,
Albany, N. Y.

April 20, 1932

Acheson, John M.,
Lynbrook, L. I.

Alimoff, Walter,
New York, N. Y.

Atkinson, Horace B.,
Utica, N. Y.

Barron, Donald W.,
New York, N. Y.

Bischof, George F.,
Brooklyn, N. Y.

Brothers, Arthur M.,
New York, N. Y.

Carroll, Alf. L.,
Yonkers, N. Y.

Christie, Wm. J.,
New York, N. Y.

*Close, Wm. F., Jr.,
Poughkeepsie, N. Y.

Dwyer, John J.,
New York, N. Y.

Eaton, Edwin R.,
Crown Point, N. Y.

Eidmann, Frank L.,
Princeton, N. J.

Fitzer, Paul F.,
Buffalo, N. Y.

Fruchtbaum, Jacob,
Buffalo, N. Y.

Gardell, Eric B.,
Ridgewood, L. I.

Gardner, Warren,
New York, N. Y.

Hartness, James C.,
Tampa, Fla.

Krenzer, Emanuel C.,
Bronx, N. Y.

Lawrence, Harold A.,
New York, N. Y.

*Lynch, Edward L.,
Brooklyn, N. Y.

Mason, Henry L.,
New York, N. Y.

Melitzer, Samuel,
New York, N. Y.

Moore, Wm. J.,
Albany, N. Y.

Murphy, S. W. A.,
New York, N. Y.

Murray, Frank A.,
Woodhaven, L. I.

Nyde, Frederick N.,
Bronx, N. Y.

Reynolds, Wm. W.,
Nyack, N. Y.

Rowe, Robert R.,
Buffalo, N. Y.

Schaefer, Geo. E.,
Brooklyn, N. Y.

Sidwell, George R.,
Kenmore, N. Y.

Siems, V. Bernard,
Jackson Heights, L. I.

Smaltz, John C.,
New York, N. Y.

Tamburrelli, Hector,
Bronx, N. Y.

Thompson, Wesley B.,
Yonkers, N. Y.

Timmerman, Wayne E.,
Saranac Lake, N. Y.

Turner, John R.,
Bronx, N. Y.

Viola, Felix,
New York, N. Y.

Williams, James P.,
New York, N. Y.

Williams, Wm. G.,
Flushing, L. I.

Wisley, Grover H.,
Tenafly, N. J.

Woodhouse, Glenn A.,
New York, N. Y.

Zwanziger, David E.,
L. I. City, N. Y.

May 19, 1932

Anderson, Elias H.,
Buffalo, N. Y.

Baker, Morris,
Queens, N. Y.

Baldwin, Siluan F.,
Jamaica, N. Y.

Beale, Arthur W.,
Rochester, N. Y.

*Bryner, Guy H.,
Springville, N. Y.

Burkland, Carl W.,
Brooklyn, N. Y.

Cangemi, John F.,
Brooklyn, N. Y.

Clinch, Chas. G.,
Carthage, N. Y.

Cohen, Sigmund,
Brooklyn, N. Y.

Cooke, Harold D.,
Jamaica, N. Y.

Crandall, J. Stuart,
Malden, Mass.

Crowe, Andrew J., Jr.,
Albany, N. Y.

Cummings, Alvin M.,
Mineville, N. Y.

Denitto, Dominic P.,
Bronx, N. Y.

Dickie, Roy N.,
White Plains, N. Y.

Dow, Melvin C.,
Newburgh, N. Y.

Gallancy, William,
Rochester, N. Y.

George, Gilbert G.,
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Gibbons, Edward J.,
Syracuse, N. Y.

Graham, Russell B.,
Utica, N. Y.

Hall, Selden H.,
Poughkeepsie, N. Y.

Heidenreich, Edwin L.,
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Henry, Harold W.,
Port Henry, N. Y.

Heslop, Paul L.,
Plainfield, N. J.

Holden, LeRoy R.,
Rocheser, N. Y.

Larson, Alfred V.,
St. George, S. I.

Lassen, Benjamin W.,
New York, N. Y.

Loewy, Alexander,
New York, N. Y.

Lovering, Phillips H.,
Babylon, N. Y.

McBean, Douglas M.,
Canajoharie, N. Y.

McIlwaine, Joseph C.,
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McKee, Hugh P.,
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McGrath, James E.,
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Mason, Donald B.,
White Plains, N. Y.

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New York, N. Y.

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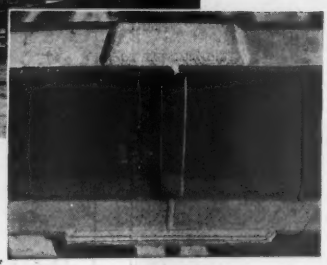

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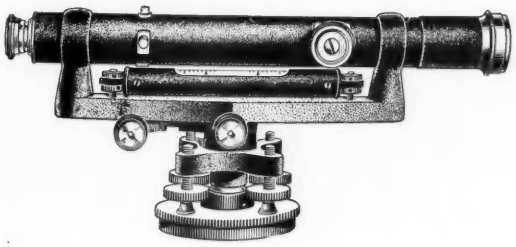

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